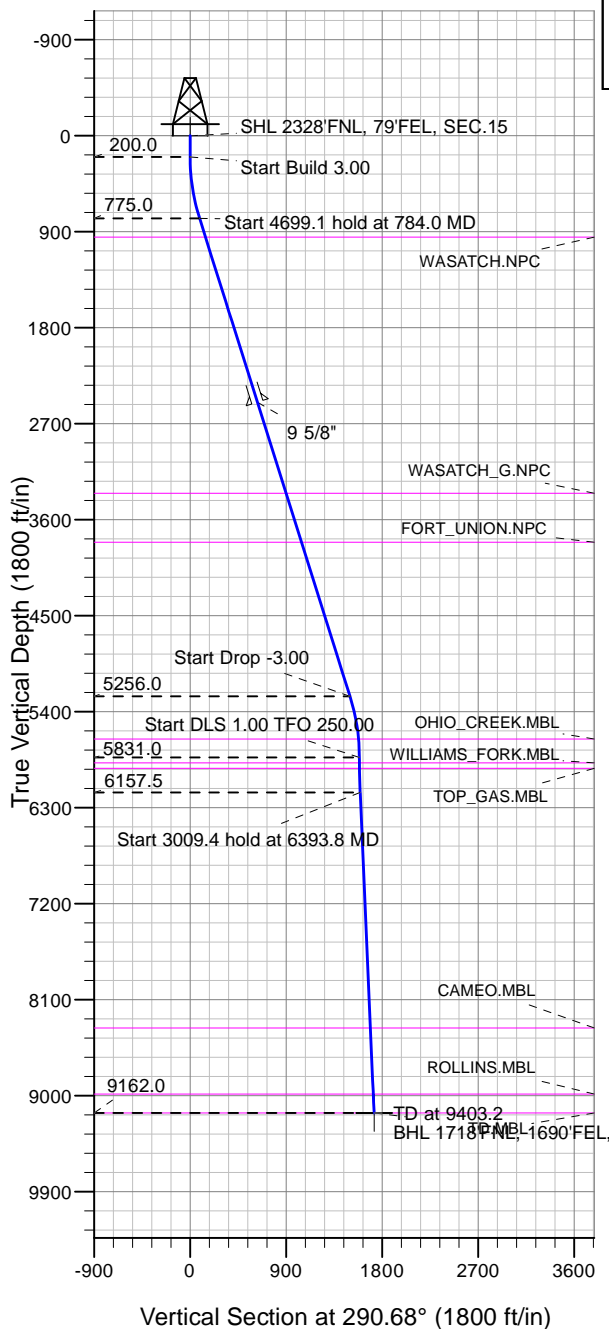
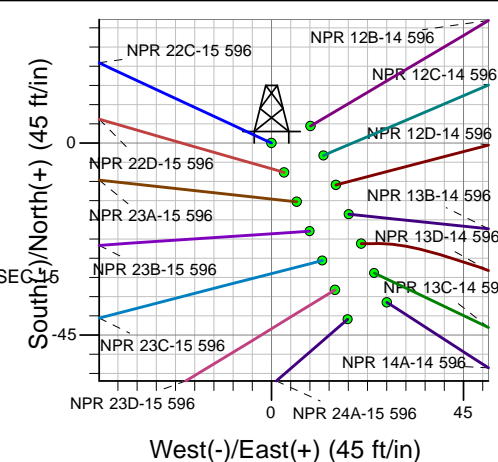
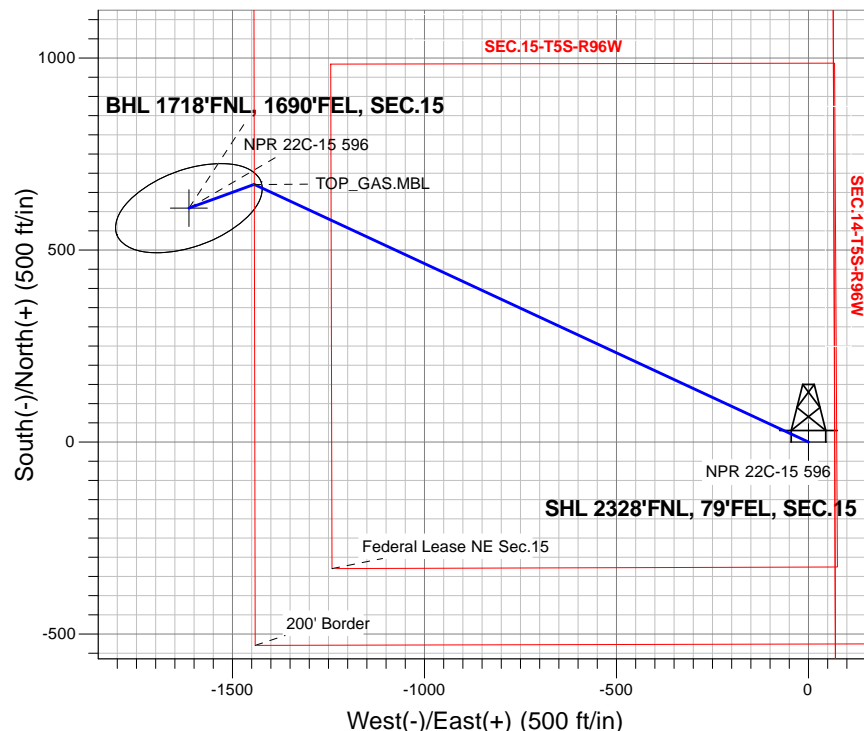


Well Name: **NPR 22C-15 596**
 Surface Location: NPR H15 596 North Pad Sec.15-T5S-R96W
 NAD 1927 - Western US , Universal Transverse Mercator (US Survey Feet)
 Zone 12N (114 W to 108 W)
 Ground Elevation: 6429.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 14398983.56 2444303.60 39.615968 -108.145722
 Original Well Elev WELL @ 6453.0ft (Original Well Elev)



Caerus Oil and Gas LLC



NPR 22C-15 596
 Plan #1 (12-01-17)
 10:23, December 15 2017



Azimuths to True North
 Magnetic North: 9.63°

Magnetic Field
 Strength: 51522.3snT
 Dip Angle: 65.85°
 Date: 12/15/2017
 Model: HDGM

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SHL 2328'FNL, 79'FEL, SEC.15	1.0	0.0	0.0	39.615968	-108.145722	Point
BHL 1718'FNL, 1690'FEL, SEC.15	9162.0	609.0	-1613.5	39.617640	-108.151449	Ellipse (Radii: L200.0 W100.0)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	784.0	17.52	294.93	775.0	37.3	-80.4	3.00	294.93	88.4	
4	5483.1	17.52	294.93	5256.0	633.5	-1363.2	0.00	0.00	1499.1	
5	6067.1	0.00	0.00	5831.0	670.9	-1443.6	3.00	180.00	1587.5	
6	6393.8	3.27	250.00	6157.5	667.7	-1452.3	1.00	250.00	1594.6	
7	9403.2	3.27	250.00	9162.0	609.0	-1613.5	0.00	0.00	1724.6	BHL 1718'FNL, 1690'FEL, SEC.15



Caerus Oil and Gas LLC

SEC.15-T5S-R96W

NPR H15 596 North Pad Sec.15-T5S-R96W

NPR 22C-15 596

Wellbore #1

Plan: Plan #1 (12-01-17)

Standard Planning Report

15 December, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22C-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 North Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 22C-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-01-17)		

Project	SEC.15-T5S-R96W, Garfield County, CO		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		Using Well Reference Point
Map Zone:	Zone 12N (114 W to 108 W)		Using geodetic scale factor

Site	NPR H15 596 North Pad Sec.15-T5S-R96W				
Site Position:		Northing:	14,398,987.82 usft	Latitude:	39.615979
From:	Lat/Long	Easting:	2,444,312.67 usft	Longitude:	-108.145689
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.82

Well	NPR 22C-15 596					
Well Position	+N/-S	-4.0 ft	Northing:	14,398,983.56 usft	Latitude:	39.615968
	+E/-W	-9.2 ft	Easting:	2,444,303.61 usft	Longitude:	-108.145722
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	6,429.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/15/2017	9.63	65.85	51,522

Design	Plan #1 (12-01-17)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	290.68

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
784.0	17.52	294.93	775.0	37.3	-80.4	3.00	3.00	0.00	294.93	
5,483.1	17.52	294.93	5,256.0	633.5	-1,363.2	0.00	0.00	0.00	0.00	
6,067.1	0.00	0.00	5,831.0	670.9	-1,443.6	3.00	-3.00	0.00	180.00	
6,393.8	3.27	250.00	6,157.5	667.7	-1,452.3	1.00	1.00	-33.67	250.00	
9,403.2	3.27	250.00	9,162.0	609.0	-1,613.5	0.00	0.00	0.00	0.00	BHL 1718'FNL, 1690'

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22C-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 North Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 22C-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-01-17)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 2328'FNL, 79'FEL, SEC.15									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	3.00	294.93	300.0	1.1	-2.4	2.6	3.00	3.00	0.00
400.0	6.00	294.93	399.6	4.4	-9.5	10.4	3.00	3.00	0.00
500.0	9.00	294.93	498.8	9.9	-21.3	23.4	3.00	3.00	0.00
600.0	12.00	294.93	597.1	17.6	-37.8	41.6	3.00	3.00	0.00
700.0	15.00	294.93	694.3	27.4	-59.0	64.9	3.00	3.00	0.00
784.0	17.52	294.93	775.0	37.3	-80.4	88.4	3.00	3.00	0.00
800.0	17.52	294.93	790.2	39.4	-84.7	93.2	0.00	0.00	0.00
900.0	17.52	294.93	885.6	52.1	-112.0	123.2	0.00	0.00	0.00
970.7	17.52	294.93	953.0	61.0	-131.3	144.4	0.00	0.00	0.00
WASATCH.NPC									
1,000.0	17.52	294.93	980.9	64.7	-139.3	153.2	0.00	0.00	0.00
1,100.0	17.52	294.93	1,076.3	77.4	-166.6	183.2	0.00	0.00	0.00
1,200.0	17.52	294.93	1,171.6	90.1	-193.9	213.2	0.00	0.00	0.00
1,300.0	17.52	294.93	1,267.0	102.8	-221.2	243.3	0.00	0.00	0.00
1,400.0	17.52	294.93	1,362.4	115.5	-248.5	273.3	0.00	0.00	0.00
1,500.0	17.52	294.93	1,457.7	128.2	-275.8	303.3	0.00	0.00	0.00
1,600.0	17.52	294.93	1,553.1	140.9	-303.1	333.3	0.00	0.00	0.00
1,700.0	17.52	294.93	1,648.4	153.6	-330.4	363.4	0.00	0.00	0.00
1,800.0	17.52	294.93	1,743.8	166.2	-357.7	393.4	0.00	0.00	0.00
1,900.0	17.52	294.93	1,839.2	178.9	-385.0	423.4	0.00	0.00	0.00
2,000.0	17.52	294.93	1,934.5	191.6	-412.3	453.4	0.00	0.00	0.00
2,100.0	17.52	294.93	2,029.9	204.3	-439.6	483.4	0.00	0.00	0.00
2,200.0	17.52	294.93	2,125.3	217.0	-466.9	513.5	0.00	0.00	0.00
2,300.0	17.52	294.93	2,220.6	229.7	-494.2	543.5	0.00	0.00	0.00
2,400.0	17.52	294.93	2,316.0	242.4	-521.5	573.5	0.00	0.00	0.00
2,500.0	17.52	294.93	2,411.3	255.1	-548.8	603.5	0.00	0.00	0.00
2,593.0	17.52	294.93	2,500.0	266.8	-574.2	631.5	0.00	0.00	0.00
9 5/8"									
2,600.0	17.52	294.93	2,506.7	267.7	-576.1	633.6	0.00	0.00	0.00
2,700.0	17.52	294.93	2,602.1	280.4	-603.4	663.6	0.00	0.00	0.00
2,800.0	17.52	294.93	2,697.4	293.1	-630.7	693.6	0.00	0.00	0.00
2,900.0	17.52	294.93	2,792.8	305.8	-658.0	723.6	0.00	0.00	0.00
3,000.0	17.52	294.93	2,888.1	318.5	-685.3	753.7	0.00	0.00	0.00
3,100.0	17.52	294.93	2,983.5	331.2	-712.6	783.7	0.00	0.00	0.00
3,200.0	17.52	294.93	3,078.9	343.9	-739.9	813.7	0.00	0.00	0.00
3,300.0	17.52	294.93	3,174.2	356.6	-767.2	843.7	0.00	0.00	0.00
3,400.0	17.52	294.93	3,269.6	369.2	-794.5	873.7	0.00	0.00	0.00
3,487.5	17.52	294.93	3,353.0	380.3	-818.4	900.0	0.00	0.00	0.00
WASATCH_G.NPC									
3,500.0	17.52	294.93	3,364.9	381.9	-821.8	903.8	0.00	0.00	0.00
3,600.0	17.52	294.93	3,460.3	394.6	-849.1	933.8	0.00	0.00	0.00
3,700.0	17.52	294.93	3,555.7	407.3	-876.4	963.8	0.00	0.00	0.00
3,800.0	17.52	294.93	3,651.0	420.0	-903.7	993.8	0.00	0.00	0.00
3,900.0	17.52	294.93	3,746.4	432.7	-931.0	1,023.9	0.00	0.00	0.00
3,969.9	17.52	294.93	3,813.0	441.5	-950.1	1,044.8	0.00	0.00	0.00
FORT_UNION.NPC									
4,000.0	17.52	294.93	3,841.7	445.4	-958.3	1,053.9	0.00	0.00	0.00
4,100.0	17.52	294.93	3,937.1	458.1	-985.6	1,083.9	0.00	0.00	0.00
4,200.0	17.52	294.93	4,032.5	470.7	-1,013.0	1,113.9	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22C-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 North Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 22C-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-01-17)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.0	17.52	294.93	4,127.8	483.4	-1,040.3	1,143.9	0.00	0.00	0.00
4,400.0	17.52	294.93	4,223.2	496.1	-1,067.6	1,174.0	0.00	0.00	0.00
4,500.0	17.52	294.93	4,318.5	508.8	-1,094.9	1,204.0	0.00	0.00	0.00
4,600.0	17.52	294.93	4,413.9	521.5	-1,122.2	1,234.0	0.00	0.00	0.00
4,700.0	17.52	294.93	4,509.3	534.2	-1,149.5	1,264.0	0.00	0.00	0.00
4,800.0	17.52	294.93	4,604.6	546.9	-1,176.8	1,294.1	0.00	0.00	0.00
4,900.0	17.52	294.93	4,700.0	559.6	-1,204.1	1,324.1	0.00	0.00	0.00
5,000.0	17.52	294.93	4,795.4	572.2	-1,231.4	1,354.1	0.00	0.00	0.00
5,100.0	17.52	294.93	4,890.7	584.9	-1,258.7	1,384.1	0.00	0.00	0.00
5,200.0	17.52	294.93	4,986.1	597.6	-1,286.0	1,414.1	0.00	0.00	0.00
5,300.0	17.52	294.93	5,081.4	610.3	-1,313.3	1,444.2	0.00	0.00	0.00
5,400.0	17.52	294.93	5,176.8	623.0	-1,340.6	1,474.2	0.00	0.00	0.00
5,483.1	17.52	294.93	5,256.0	633.5	-1,363.2	1,499.1	0.00	0.00	0.00
5,500.0	17.01	294.93	5,272.2	635.6	-1,367.8	1,504.1	3.00	-3.00	0.00
5,600.0	14.01	294.93	5,368.5	646.9	-1,392.1	1,530.8	3.00	-3.00	0.00
5,700.0	11.01	294.93	5,466.1	656.0	-1,411.7	1,552.4	3.00	-3.00	0.00
5,800.0	8.01	294.93	5,564.8	663.0	-1,426.7	1,568.9	3.00	-3.00	0.00
5,893.9	5.20	294.93	5,658.0	667.6	-1,436.5	1,579.7	3.00	-3.00	0.00
OHIO_CREEK.MBL									
5,900.0	5.01	294.93	5,664.1	667.8	-1,437.0	1,580.2	3.00	-3.00	0.00
6,000.0	2.01	294.93	5,763.9	670.4	-1,442.5	1,586.3	3.00	-3.00	0.00
6,067.1	0.00	0.00	5,831.0	670.9	-1,443.6	1,587.5	3.00	-3.00	0.00
6,100.0	0.33	250.00	5,863.9	670.8	-1,443.7	1,587.6	1.00	1.00	0.00
6,117.1	0.50	250.00	5,881.0	670.8	-1,443.8	1,587.7	1.00	1.00	0.00
WILLIAMS_FORK.MBL									
6,167.1	1.00	250.00	5,931.0	670.6	-1,444.4	1,588.2	1.00	1.00	0.00
TOP_GAS.MBL									
6,200.0	1.33	250.00	5,963.9	670.3	-1,445.0	1,588.7	1.00	1.00	0.00
6,300.0	2.33	250.00	6,063.8	669.3	-1,448.0	1,591.1	1.00	1.00	0.00
6,393.8	3.27	250.00	6,157.5	667.7	-1,452.3	1,594.6	1.00	1.00	0.00
6,400.0	3.27	250.00	6,163.7	667.6	-1,452.7	1,594.8	0.00	0.00	0.00
6,500.0	3.27	250.00	6,263.5	665.6	-1,458.0	1,599.2	0.00	0.00	0.00
6,600.0	3.27	250.00	6,363.4	663.7	-1,463.4	1,603.5	0.00	0.00	0.00
6,700.0	3.27	250.00	6,463.2	661.7	-1,468.7	1,607.8	0.00	0.00	0.00
6,800.0	3.27	250.00	6,563.0	659.8	-1,474.1	1,612.1	0.00	0.00	0.00
6,900.0	3.27	250.00	6,662.9	657.8	-1,479.5	1,616.4	0.00	0.00	0.00
7,000.0	3.27	250.00	6,762.7	655.9	-1,484.8	1,620.8	0.00	0.00	0.00
7,100.0	3.27	250.00	6,862.6	653.9	-1,490.2	1,625.1	0.00	0.00	0.00
7,200.0	3.27	250.00	6,962.4	652.0	-1,495.5	1,629.4	0.00	0.00	0.00
7,300.0	3.27	250.00	7,062.2	650.0	-1,500.9	1,633.7	0.00	0.00	0.00
7,400.0	3.27	250.00	7,162.1	648.1	-1,506.2	1,638.0	0.00	0.00	0.00
7,500.0	3.27	250.00	7,261.9	646.1	-1,511.6	1,642.4	0.00	0.00	0.00
7,600.0	3.27	250.00	7,361.7	644.2	-1,516.9	1,646.7	0.00	0.00	0.00
7,700.0	3.27	250.00	7,461.6	642.2	-1,522.3	1,651.0	0.00	0.00	0.00
7,800.0	3.27	250.00	7,561.4	640.3	-1,527.7	1,655.3	0.00	0.00	0.00
7,900.0	3.27	250.00	7,661.3	638.3	-1,533.0	1,659.7	0.00	0.00	0.00
8,000.0	3.27	250.00	7,761.1	636.4	-1,538.4	1,664.0	0.00	0.00	0.00
8,100.0	3.27	250.00	7,860.9	634.4	-1,543.7	1,668.3	0.00	0.00	0.00
8,200.0	3.27	250.00	7,960.8	632.5	-1,549.1	1,672.6	0.00	0.00	0.00
8,300.0	3.27	250.00	8,060.6	630.5	-1,554.4	1,676.9	0.00	0.00	0.00
8,400.0	3.27	250.00	8,160.4	628.6	-1,559.8	1,681.3	0.00	0.00	0.00
8,500.0	3.27	250.00	8,260.3	626.6	-1,565.1	1,685.6	0.00	0.00	0.00
8,600.0	3.27	250.00	8,360.1	624.7	-1,570.5	1,689.9	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22C-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 North Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 22C-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-01-17)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,605.9	3.27	250.00	8,366.0	624.6	-1,570.8	1,690.2	0.00	0.00	0.00
CAMEO.MBL									
8,700.0	3.27	250.00	8,460.0	622.7	-1,575.8	1,694.2	0.00	0.00	0.00
8,800.0	3.27	250.00	8,559.8	620.8	-1,581.2	1,698.6	0.00	0.00	0.00
8,900.0	3.27	250.00	8,659.6	618.8	-1,586.6	1,702.9	0.00	0.00	0.00
9,000.0	3.27	250.00	8,759.5	616.9	-1,591.9	1,707.2	0.00	0.00	0.00
9,100.0	3.27	250.00	8,859.3	615.0	-1,597.3	1,711.5	0.00	0.00	0.00
9,200.0	3.27	250.00	8,959.1	613.0	-1,602.6	1,715.8	0.00	0.00	0.00
9,226.9	3.27	250.00	8,986.0	612.5	-1,604.1	1,717.0	0.00	0.00	0.00
ROLLINS.MBL									
9,300.0	3.27	250.00	9,059.0	611.1	-1,608.0	1,720.2	0.00	0.00	0.00
9,400.0	3.27	250.00	9,158.8	609.1	-1,613.3	1,724.5	0.00	0.00	0.00
9,403.2	3.27	250.00	9,162.0	609.0	-1,613.5	1,724.6	0.00	0.00	0.00
TD.MBL - BHL 1718'FNL, 1690'FEL, SEC.15									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 2328'FNL, 79'FEL, - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	14,398,983.56	2,444,303.61	39.615968	-108.145722
BHL 1718'FNL, 1690'FE - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	9,162.0	609.0	-1,613.5	14,399,541.21	2,442,671.02	39.617640	-108.151449

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,593.0	2,500.0	9 5/8"	9-5/8	12-1/4

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
970.7	953.0	WASATCH.NPC		0.00	
3,487.5	3,353.0	WASATCH_G.NPC		0.00	
3,969.9	3,813.0	FORT_UNION.NPC		0.00	
5,893.9	5,658.0	OHIO_CREEK.MBL		0.00	
6,117.1	5,881.0	WILLIAMS_FORK.MBL		0.00	
6,167.1	5,931.0	TOP_GAS.MBL		0.00	
8,605.9	8,366.0	CAMEO.MBL		0.00	
9,226.9	8,986.0	ROLLINS.MBL		0.00	
9,403.2	9,162.0	TD.MBL		0.00	

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22C-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 North Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 22C-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-01-17)		